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(21) Application No. 27715/73 (22) Filed 11 June 1973

(44) Complete Specification published 28 Jan. 1976

(51) INT. CL.² C09J 7/02
B32B 3/16

(52) Index at acceptance

B2E 18Y 209 23Y 258 305 307 31Y 398 459 53Y
B5N 0316

(54) IMPROVEMENTS IN OR RELATING TO ADHESIVE TAPE

(71) I, SHU-LIEN LIOU, a Chinese citizen, residing at No. 195 Chung King North Road, Sec. 3, Taipei, Taiwan, do hereby declare the invention for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to a section disengaging adhesive tape.

Conventional adhesive tape, either Cellophane (Registered Trade Mark) or PVC Scotch tape, is generally in the form of a continuous strip which is coated entirely with an adhesive agent on one side. Such a construction presents problems in using the tape for packaging and the like since, first of all, it is difficult to unstick the free end of the tape from the roll to which it is usually adhered and, secondly, in order to cut the desired length of tape an additional cutting means must be externally positioned upon the reel. Furthermore, once the package or any other material has been sealed with such adhesive tape, its removal for an extra inspection, such as a quality control or customs inspection, destroys its integrity and the appearance of the packaging. Also, since the tape when applied has no free end available for gripping, it is difficult and tiresome to remove it from the packaging.

An object of the present invention is to provide an adhesive tape having non-adhesive sections at least one of which will constitute a non-adhesive free end when the tape is formed on a reel.

Another object of the present invention is to provide an adhesive tape with a plurality of severable lines thereon for conveniently tearing off a desired length of tape without the aid of an externally positioned cutting means.

A further object of the present invention is to provide at least one free end flap on the adhesive tape to facilitate its removal from a package after it has been adhered

thereto without damaging the tape or ruining the appearance of the package.

According to the present invention, there is provided a section disengaging adhesive tape comprising an elongate substrate carrying a plurality of adhesive sections separated from each other by a plurality of non-adhesive sections, said non-adhesive sections being spaced one from another longitudinally with respect to said substrate, each said adhesive section being formed from a layer of adhesive material having a substantially constant depth; and a severable line formed at each non-adhesive section, said line being normal to the longitudinal axis of said substrate.

The adhesive material may be a layer extending continuously along the length of said substrate, and each of said non-adhesive sections is formed by attaching a respective piece of non-adhesive material onto the free surface of said adhesive material. Each non-adhesive section may be defined by a gap formed between two adjacent adhesive sections. The severable line may be located at a central portion of each of said non-adhesive sections. Each of the severable lines may be located along a line immediately adjacent one edge of each of said adhesive sections.

The invention will now be described by way of example only with reference to the accompanying drawings wherein:—

Fig. 1 is a perspective view of an embodiment of this invention showing a section-disengaging adhesive tape wound on a reel.

Figs. 2A, B and C illustrate a partial perspective view of each of several arrangements of the section-disengaging adhesive tape according to the present invention, in which Fig. 2A shows a non-adhesive section formed by intermittently applying the adhesive material on the tape, while Figs. 2B and 2C show non-adhesive sections formed by attaching a piece of

non-adhesive material on the substrate which carries a continuous coating of the adhesive.

Fig. 3 is a view in perspective of the application of the adhesive tape shown in Fig. 2C to a package.

Fig. 4 is a view in perspective of the application of the adhesive tape shown in Fig. 2B to a package.

Referring to the drawings, the thickness of the adhesive tape herein shown has been suitably exaggerated for clarity. Each different element is individually designated a respective reference numeral, the same reference numeral representing the same portion of the article in each Figure.

As shown in Fig. 1, the adhesive tape of the present invention is wound onto a reel such as a conventional piece of roll or any other such support. In one arrangement, as shown in Fig. 2A, the adhesive tape is a continuous length of substrate constituting a tape 10, one side of the tape being discontinuously coated with layer portions of an adhesive material, at a substantially constant depth, to define adhesive sections 14 of predetermined length, adjacent adhesive sections 14 being separated by non-adhesive sections 12. Thus, the adhesive sections 14 and non-adhesive sections 12 are sequentially formed along the tape which has a free end 12' defined by one non-adhesive section for use as a flap which may be grasped by a person using the tape.

In another arrangement, the adhesive is applied in a continuous layer to one side of the tape and each non-adhesive section 12 is formed by attaching a piece of non-adhesive material such as Cellophane or other suitable material at intervals along the adhesive coating, as shown in Figs. 2B and 2C, to nullify the adhesiveness of the adhesive material. At one end of, or in a central portion of, each non-adhesive section 12, a severable line 13 is formed normal to the longitudinal axis of the tape to facilitate tearing of the tape without the requirement of an external tape-cutting device.

In the arrangement shown in Fig. 2C, the non-adhesive section 12 is provided at one side only of the severable line 13, while in Fig. 2B the non-adhesive section 12 extends each side of the severable line 13.

When applying the tape to a package, the free end flap 12' of the tape is easily grasped since the non-adhesive section does not stick to the underlying tape on the reel. A desired length of tape is then pulled from the reel and removed therefrom by tearing along the severable line 13. It is then attached to a flap of a parcel or package cover, as shown in Figs 3 and 4.

Upon sealing the package cover, the adhesive sections 14 tightly seal the flap of cover while the non-adhesive sections 12 are left free so as to facilitate subsequent removal of the tape from the package cover and to enable the adhesive tape to be re-used. This ease of handling of the tape due to the severable lines and non-adhesive sections, preserves the elegance of the parcel or the package cover as well as the integrity of the tape.

If the package cover is surface coated with a layer of resin or some other kind of material which does not damage the adhesive layer, the tape may be used again after its removal from the package.

WHAT I CLAIM IS:—

1. A section-disengaging adhesive tape comprising an elongate substrate carrying a plurality of adhesive sections from each other by a plurality of non-adhesive sections, said non-adhesive sections being spaced one from another longitudinally with respect to said substrate, each said adhesive section being formed from a layer of adhesive material having a substantially constant depth; and a severable line formed at each non-adhesive section, said line being normal to the longitudinal axis of said substrate.

2. A section-disengaging tape as claimed in Claim 1, wherein said adhesive material is a layer extending continuously along the length of said substrate, and each of said non-adhesive sections is formed by attaching a respective piece of non-adhesive material onto the free surface of said adhesive material.

3. A section-disengaging tape as claimed in Claim 1 wherein each said non-adhesive section is defined by a gap formed between two adjacent adhesive sections.

4. A section-disengaging tape as claimed in any one of the preceding claims wherein said severable line is located at a central portion of each of said non-adhesive sections.

5. A section-disengaging tape as claimed in any one of Claims 1 to 3 wherein each of the severable lines is located along a line immediately adjacent one edge of each of said adhesive sections.

6. A section-disengaging tape substantially as herein described with reference to, and as shown in Figures 1 and, 2A, or 2B, or 2C of the accompanying drawings.

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FIG. 1

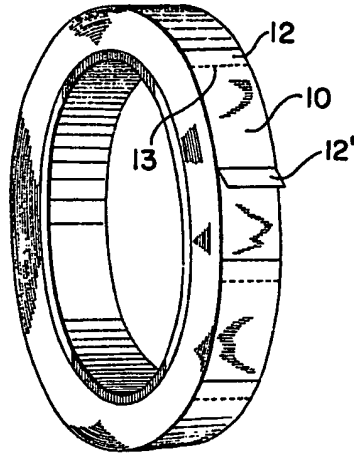


FIG. 3

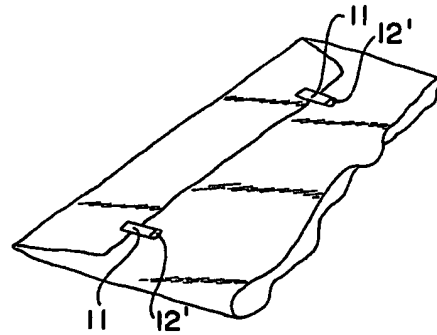


FIG. 2A

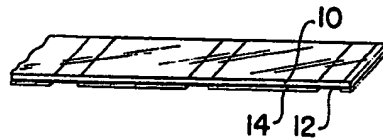


FIG. 2B

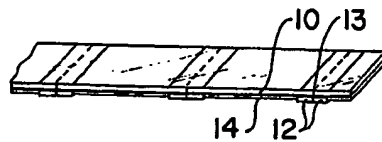


FIG. 2C

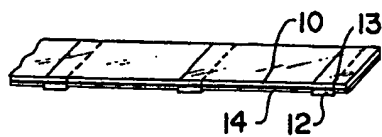


FIG. 4

